

## 26.3: Data and Analysis

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### **Data Collection (25 points)**

Following your detailed protocol, perform all the experiments. Record your observations and take pictures of your key steps in the process. Your observations and images need to be incorporated in your data section and this section should be as detailed as possible as you will use this information to complete your discussion.

**Part 1:** Caramel

**Part 2:** Black Snake

**Part 3:** Invisible Ink

### **Data Processing (25 points)**

1. Provide the formula and chemical structure for table sugar.

2. Select all that apply. Table sugar is:

An atom

An element

A molecule

A compound

An organic compound

An inorganic compound

An ionic compound

Soluble in water

Able to react with itself

Only able to react with other materials

Crystalline

Amorphous

3. Select all that apply. Sodium nitrate is:

An atom

An element

A molecule

A compound

An organic compound

An inorganic compound

An ionic compound

Soluble in water

Able to react with itself

Only able to react with other materials

Crystalline

Amorphous

4. Select all that apply. Paper is:

An atom

An element

A molecule

A compound

A mixture

An organic compound

An inorganic compound

An ionic compound

Soluble in water

Able to react with itself

Only able to react with other materials

Crystalline

Amorphous

5. For the black snake experiment, comment on whether the volume is increasing, decreasing, or remaining the same based on your observations.

6. Looking at the product of the black snake experiment, estimate its composition.

7. Fill in the following table using the data and observations from your experiment:

Assumptions made	Testing the assumption	If assumptions are wrong ...
The distilled water is pure	Evaporate it and check for residue	
Sugar is pure		

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